

Claims

1. Transmission device for introducing optical radiation into the ear, comprising an optical wave guide which connects a light source to an ear holder to output said radiation, characterized in that the ear holder (10) comprises a first transition piece (11), wherein the end area of the optical wave guide (20) is maintained, and a retaining bar (12), which can be introduced into the transition piece and can be bent in such a manner that the outlet (22) of the optical wave guide (20) can be positioned on the ear.

2. Transmission device according to claim 1, characterized in that the first transition piece is embodied in an elbow-shaped manner.

3. Transmission device according to claim 2, characterized in that the transition piece (11) comprises two channel shaped half shells (11.2, 11.2), of which at least one comprises wedge-shaped ridges (11.2) in transverse direction which are pressed into the jacket of the optical wave guide (20) and which fix the optical wave guide (20).

4. Transmission device according to claim 1, characterized in that the end area (11A) directed to the ear of the first transition piece 11 is enclosed by a replaceable ear piece (13).

5. Transmission device according to claim 1, characterized in that a second transition piece is provided (30) for introducing the laser radiation into the optical wave guide (20), which serves at least partially as focusing sleeve for the laser radiation and has a conical tapered inner shape, and in the end area (31) of which, which is shaped in the form of a hollow cylinder, the optical wave guide (20) is positioned, wherein the focusing region (F) generated in the focusing sleeve of the laser radiation is immediately ahead of the entrance opening of the optical wave guide (20).

6. Transmission device according to claim 5, characterized in that a pressing tip (32) is fixed to the hollow cylindrical end portion (31), accommodating the end portion of the optical wave guide (20) at the laser side.

5 7. Transmission device according to claim 5, characterized in that the cone-shaped inner surface of the second transmission piece (30) is metallized at least in its conical portion.

8. Transmission device according to claim 6, characterized in that the pressing tip (32) comprises a through bore (33) having a first portion (33A) with a radius (R1), into which the
10 end portion of the coated optical wave guide (20) is inserted, in particular glued, and a second continuing portion (33B), having a second radius (R2), into which a de-coated end portion (20A) of the optical wave guide (20) is protruding with its entire length.

9. Transmission device according to claim 5, characterized in that the second transition
15 piece (30) comprises at least one holder (34, 35) for a bearing member for the laser (40).

10. Transmission device according to claim 9, characterized in that the second transition piece (30) and the laser (40) are detachably connectable by means of a coupling portion (42).

20 11. Transmission device according to claim 9, characterized in that the holders (34, 35) are disposed at a ring (39), which seats on a tapered holding portion (41) of the laser (40).